

WHAT IS CLAIMED IS:

1. A multi-layered optical disk to which information is recorded with a focused light beam, comprising:

5 a transparent substrate;
 a first recording layer and a second recording layers faced to each other and supported by the transparent substrate, the first recording layer having a non-erasable information zone on which a pit array is
10 formed as non-erasable information and a first recordable zone on which a recording mark array is formed with an irradiation of the focused light beam passing through the transparent substrate, the second recording layer having a non-recording zone on which
15 information data is prevented from being recoded and a second recordable zone on which a recording mark array is formed with the irradiation of the focused light beam, and the non-recording zone being faced to the non-erasable information zone and including an
20 illumination region on which a beam spot is formed by the light beam focused on the non-erasable information zone.

2. The multi-layered optical disk according to claim 1, wherein a range of the second recordable zone
25 is defined based on the beam spot formed on the second recording layer by the light beam which is focused on the outside of an outer peripheral edge of the

non-erasable information zone in the first recording layer.

3. The multi-layered optical disk according to claim 1, wherein the outer peripheral edge is
5 determined based on estimating a sum of a radius of a beam spot formed by the focusing light beam on the second recording layer and allowable eccentricity between the first recording layer and second recording layer.

10 4. The multi-layered optical disk according to claim 1, wherein a guide groove is formed in the first recordable zone, the second recordable zones and the non-erasable information zone.

15 5. The multi-layered optical disk according to claim 1, wherein the non-recording zone on the second recording layer is larger than the non-erasable information zone of the first recording layer.

20 6. The multi-layered optical disk according to claim 1, wherein the non-recording zone on the second recording layer is used as a recording zone of invalid information.

25 7. The multi-layered optical disk according to claim 6, wherein the invalid information includes at least one of test recording, synchronous pattern, and buffering effect.

8. The multi-layered optical disk according to claim 1, wherein the first recording layer is disposed

at the incidence side of the focused light beam and the light beam passing through the first recording layer is incident on the second recording layer.

5 9. The multi-layered optical disk according to claim 1, wherein information on the non-erasable information zone includes an address for specifying the non-recording zone on the second recording layer.

10 10. The multi-layered optical disk according to claim 1, wherein the second recording layer is disposed at the incidence side of the focused light beam and the light beam passing through the second recording layer is incident on the first recording layer.

15 11. The multi-layered optical disk according to claim 1, wherein the non-erasable information zone is disposed in a lead-in area or a lead-out area of the optical disk.

12. A recording/reproducing apparatus for reproducing information from and recording information on a multi-layered optical disk comprising:

20 a light beam unit configured to generate a focused light beam on the optical disk, optical disk including a transparent substrate;

25 a first recording layer and a second recording layers faced to each other and supported by the transparent substrate, the first recording layer having a non-erasable information zone on which a pit array is formed as non-erasable

information and a first recordable zone on which a
recording mark array is formed with the
irradiation of the focused light beam passing
through the transparent substrate, the second
5 recording layer having a non-recording zone on
which information data is prevented from being
recorded and a second recordable zone on which a
recording mark array is formed with the
irradiation of the focused light beam, the non-
10 recording zone being faced to the non-erasable
information zone and including an illumination
region on which a beam spot is formed by the light
beam focused on the non-erasable information zone,
and the non-erasable information zone includes
15 address information for specifying the non-
recording zone on the second recording layer; and
control unit configured to control reading of
information on the non-erasable information zone and
recording of data on the first and second recording
20 layer to prevent information data from being recorded
on the non-recording zone based on the address
information.